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USSR Report

TRANSPORTATION

No. 3

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CONTENTS

PAGE

AIR

Deputy Minister of Civil Aviation Cites Future Aeroflot Improvements
(I. Razumovskiy Interview; SOTSIALISTICHESKAYA INDUSTRIYA, 9 Feb 80) 1

Performance of Kazakh Branch of Civil Aviation in 1979
(V. Prokhorov; KAZAKHSTANSKAYA PRAVDA, 1 Jan 80)..... 4

MOTOR VEHICLE

Repairs, Spare Parts for KamAZ Motor Vehicles
(RABOCHAYA GAZETA, 1 Feb 80) 7

RAILROAD

Review of February Rail Transport Problems
(GUDOK, 5 Mar 80) 12

Azerbaijan Railroad System's Chief Details Problems
(F. Kengerli; BAKINSKIY RABOCHIY, 14 Feb 80) 14

Impact of BAM on Peoples of the North Studied
(Vladimir I. Boyko; OBSHCHESTVENNYYE NAUKI, No 6, 1979) 19

Problems of Construction and Development of the BAM Analyzed
(A. Kin; OBSHCHESTVENNYYE NAUKI, No 6, 1979) 33

OCEAN AND RIVER

Computer System for River Transport Described
(N. Dolgov; VODNYY TRANSPORT, 13 Nov 79) 39

CONTENTS (Continued) Page

River Fleet's Problems in Transporting Wood Products
(VODNYY TRANSPORT, 26, 4 Mar 80).................... 42

Northern Steamship Company, by Ye. Klimov
Kirensk River Port, by N. Sapsay

MISCELLANEOUS

Ukrainian SSR 1979 Transportation Plan Fulfillment
(RABOCHAYA GAZETA, 31 Jan 80) 46

AIR

DEPUTY MINISTER OF CIVIL AVIATION CITES FUTURE AEROFLOT IMPROVEMENTS

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 9 Feb 80 p 2

[Interview with Deputy Minister of Civil Aviation I. Razumovskiy by N. Paskhin: "Everything for the Passenger"]

> [Text] Last year, upwards of 100 million persons, in other words nearly one in every three residents of our country, availed themselves of Aeroflot services. Civil aviation aircraft fly routes today of nearly a billion kilometers, and nearly 3,600 of the country's cities and population centers are linked by air routes.... These are the results encountered by Aeroflot workers on their occupation day. Aeroflot is among those branches now being developed rapidly and, as often happens, purposeful advance involves some complications. Passengers are not always satisfied yet with the way in which they are being served, as the letters to our editorial staff bear out. Readers complain in their letters about delays, about inadequate information at airports, about the time involved in picking up baggage and registering tickets. The editors asked I. Razumovskiy, Deputy Minister of Civil Aviation, to respond to questions prepared on the basis of reader letters.

[Question] Every flight begins on the ground: the passenger must find a schedule, buy a ticket, obtain information on the place and time for registering and identifying baggage. At this stage of his air travel too, he is entitled to count on a certain set of conveniences. However, passengers often find themselves disappointed....

[Answer] A justified reproach. Aeroflot ground service still lags behind its air service. It is for this very reason that the efforts of specialists have been aimed at correcting this situation as quickly as possible.

The "Sirena" automatic system for issuing seats and selling tickets has been in operation at Aeroflot agencies for seven years now. And last year, it was provided with new equipment which enabled us to considerably expand its potential: tickets were sold to and seats reserved for 15 million passengers using the "Sirena" system!

Moreover, a new unionwide system for monitoring these processes, the ASU-5, has now been developed. According to even the most modest estimates, it will be able to serve up to 20 million persons yearly at Moscow airports alone. Introduction of the ASU-5 will considerably simplify procedures for reserving seats on aircraft and purchasing tickets, including return tickets. Whereas residents of Moscow and 20 cities in Siberia and the Far East can now acquire such tickets, the number of such population centers will be considerably expanded with the introduction of the ASU-5.

[Question] Many of our readers report seeing situations in which tickets for a flight they needed were not to be had, while the aircraft was sent off with dozens of empty seats....

[Answer] I will not dwell long on why this happens, but will only say that aviators will soon have available to them a so-called complex electronic dispatching system which will permit avoiding such "overlaps." It will take on the functions of checking in and recording the number of passengers and of filling flights. Using this system, an airport dispatcher will always have information on empty seats on out-going aircraft and will have a record of passengers waiting to claim them.

Other technical innovations developed by Aeroflot specialists recently will contribute to passenger comfort, as, for example, the "Sinar" and "Avia" flight information boards, with larger lighted displays, the "Regus" reservation board, which permits making out tickets much faster than currently, and finally, belt conveyors and baggage carts, which will reduce severalfold the very tedious time spent waiting for baggage. This and other equipment has already been tested and is now being supplied to the country's air harbors.

[Question] Even the most modern airship remains dependent on the whims of the weather to a considerable extent, which is why many potential Aeroflot customers prefer to make longer trips by train, to avoid any possibility of being late. In this connection, our readers correctly assume that flight regularity also comes under the heading of service....

[Answer] The regulations of the International Civil Aviation Organization (ICAO) establish three categories of landing weather conditions, weather being one of the most complex elements of the flight. The first category requires a vertical visibility of 60 meters and horizontal visibility of 800 meters. The second -- 40 and 400 meters, respectively. The third category is when the landing must be fully automatic.

So flights under the first weather category are no problem for our pilots. Today, they study flying under the second category. They are assisted here by a special device with which both the aircraft themselves and the air terminals are equipped. For example, tests of such equipment were recently concluded, with positive results, at Borispol'skiy Airport in the Ukraine. It will also be introduced in other cities.

And while we are mentioning apparatus which ensures good flight safety and regularity, which are inseparable concepts, we must not fail to mention the pilot-navigation complex now being installed on new aircraft, including the IL-86 airbus. The on-board computer in this complex permits holding the flight very precisely to the prescribed route. And herein lies the guarantee that aircraft will arrive at their destinations on schedule....

[Question] And one final question, Ivan Stepanovich. Many of our readers want to know what new aviation equipment will Aeroflot be armed with in the near future?

[Answer] Quite a bit has already been written about the 350-seat IL-86 airbus in the newspapers, so I will not discuss it in detail. Let's talk about the other aircraft.

Quite recently, a comfortable new Czech-produced aircraft, the L-410, with shorter take-offs and landings, has been put into operation on local runs. This aircraft can haul 17 passengers at 350 km/hr up to 600 km. An AN-28, an air microbus developed to replace the workhorse AN-2, is also being tested.

Finally, the 120-seat YaK-42. Its designers worked hard to ensure that this aircraft could be operated from small airfields and replace such aircraft as the YaK-40 and AN-24 on near trunk routes. New and improved equipment will appear on a total of nearly 100 passenger routes this year. Thus, the very comfortable TU-154 is replacing the IL-18 on the Moscow-Anadyr' and Krasnoyarsk-Odessa runs, as well as on routes linking the national health resort at Sochi with Khabarovsk, Frunze and Abakan.

The bulk of the new routes being proposed for the first time this year are very long ones. The flagship of Aeroflot, the IL-62, will begin flights on the run from Petropavlovsk-Kamchatskiy to Mineral'nyye Vody. The TU-154 will begin flying from Mineral'nyye Vody to Noril'sk and Yakutsk, and the TU-134 will begin flying from Murmansk to Krasnodar and from Perm' to Anapa.

About 50 new routes will begin operating in 1980.

11052
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AIR

PERFORMANCE OF KAZAKH BRANCH OF CIVIL AVIATION IN 1979

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 1 Jan 80 pp 2-3

[Article by V. Prokhorov, deputy chief of the Political-Educational Section of the Kazakh Civil Aviation Directorate: "One-Hundred-Fifty 'Happy New Years!'"]

[Text] In 1979 more than 6 million passengers were transported on the aircraft of the Kazakh Civil Aviation Directorate--200 thousand more than the figure planned for the fourth year of the five-year plan. But passengers are not interested in either the intensity of the plan or the problems connected with it. Their desire is exceedingly simple: They need to fly. To fly on a business trip, to a vacation resort, home, abroad, to a wife or relatives... Not even New Year's Day can keep them at their holiday dinner tables.

As a rule, the stream of the "restless" grows toward the end of the year. This can be explained by the reliability, speed, and comfort of Aeroflot's liners.

The republic's airports are, with certain exceptions, facilities with continuous operations. They have no holidays, or rather, the aviation specialists mark them in their own way: with increased attention, responsibility and coordination.

We are in Operations Control of the Alma-Ata Aviation Facility--the coordination center which ensures that the airport collective fulfills the daily plan. Senior controller I. I. Katasanova and controller V. I. Yevsyukova took over on the New Year's watch on 31 December. To anyone not acquainted with these women it would seem that they lack such human qualities as the ability to smile, to rejoice at a holiday or to grasp humor. But that is not so. It is an operational necessity that demands dryness and accuracy of them. All the more so during the holidays. From the very outset they submit to the pace of the complex work.

The controllers are surrounded by microphones, panels, telephones and charts. And a stream of transmissions pours out of the communications gear, which never remains silent even for a minute:

"The aircraft from Tashkent has landed...Ust-Kamenogorsk Airport is open... The aircraft is ready for take off."

"The intensity grows around New Year, as a rule," Irina Ivanovna said before going on duty. "Most often this stems from the passengers' worry. And somehow you unconsciously try to do all you can for them. But sending passengers off is only one aspect of our work. The aircraft of the airport must deliver what their missions call for--cargo or mail--on time. Medical establishments, pits, mines and conglomerates make no allowance for holidays. They require that medicine, various kinds of instruments, spare parts and much else be delivered on time. This is why dozens of aircraft will be aloft over the republic when the old year meets the New Year, and when the Kazakhs partake of that holiday spirit."

Among those aircraft is the Tu-154 flown by Pilot First Class Anatoliy Yakovlevich Glushanov of the Alma-Ata Aviation Facility. His career is linked with Aeroflot. He began working--that is, flying--in 1956 and has mastered the subtleties of flying the An-2, Li-2, Il-14, Il-18. And now he is the captain of a Tu-154. I might add, he is one of the best captains in the flight section, and one who took the initiative to fulfill his own personal five-year mission by the 110th anniversary of V. I. Lenin's birth.

"Greeting the New Year--it is my very favorite holiday, of the so-called family ones," Anotoliy Yakovlevich shared his thoughts with us. "It's a shame that I won't be able to celebrate it with my family. But you know what's reassuring? Along with the passengers and crew I will greet the New Year three times in one night. There's nothing surprising in that. We will leave Alma-Ata long before the New Year arrives. But it will catch up with us in the sky above Kustanay. We will greet the Kustanay New Year over Kuybyshev. And we will arrive in Moscow an hour before the New Year's peal of the Kremlin bells...And there will be another notable detail: On New Year's Eve I will fulfill my personal plan for the six months of the final year in the five-year plan..."

Along with the passengers and crew, the outstanding Komsomol-youth brigade of cabin attendants led by Ye. Zhdanova will also greet the New Year in the Tu-154 at an altitude of 10,000 meters. The brigade is distinguished by love for its work, attentiveness, kindness, foresight and ability to find a common language with people of the most diverse natures.

"I like being underway at New Year's," says stewardess Klara Novokhatskaya. "The passengers are especially courteous. Each of the cabin attendants receives up to 150 "Happy New Years!" during the short time of the landing. There are as many greetings as there are passengers. But we do not remain in debt. We offer them cool drinks, supper and souvenirs."

During the final hour of the departing year and the first one of the coming year about 3500 rushing passengers and dozens of the most diverse aircraft will be in the sky over Kazakhstan--from the An-24 to modern liners. The Alma-Ata Airport alone will receive aircraft from Moscow, Simferopol', Omsk, Kemerovo, Kustanay and Barnaul during these hours. It will send airships off to Moscow, Baku, Irkutsk, Novosibirsk and Tashkent.

If Grandfather Frost really existed, he would certainly give all aviation specialists rich gifts. At the very beginning of December the control group reported fulfilling its yearly plans for the primary and the majority of the planned indices. It is pleasant to note that 83 percent of the growth in transport volume has been achieved through increases in labor productivity. More than 7 million rubles profit have been earned in excess of the planned amount. Ninety-two percent of the flights on the central schedule were flown on time, which is much higher than the Aeroflot average.

At aviation facilities of the Directorate, the New Year will be marked by the start of competition to win the titles of "exemplary collectives" and to turn Aeroflot into the standard for transportation. This will be a new level in the development of civil aviation, whose ultimate goal is to completely provide for the air transport needs of the economy and to improve the quality of service provided to the passengers.

After these words the skeptic (and a skeptic remains a skeptic even on holidays) might remark, "Now the author will make his pitch: 'Fly Aeroflot!'" No, I won't say that. But really now, why not fly, if you, the passengers, are shown constant attention on the ground and in the air, on weekdays and even on New Year's Eve?

9610
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REPAIRS, SPARE PARTS FOR KAMAZ MOTOR VEHICLES

Kiev RABOCHAYA GAZETA in Russian 1 Feb 80 p 2

[Letters to editorial staff responding to article "The KamAZ [Kama Motor Vehicle Plant] Is Being Towed," published in 21 November 1979 issue of RABOCHAYA GAZETA]

> [Text] The article "The KamAZ Is Being Towed" said that the repair and technical maintenance of KamAZ motor vehicles and the provision of spare parts for them are still poorly organized in the republic. As a result, vehicles at times stand idle for several months. We are publishing the letters responding to the article "The KamAZ Is Being Towed."

/A Hundred Vehicles Standing Idle/ [in boldface]

The article "The KamAZ Is Being Towed" has been discussed by the Goskomsel'khoztekhnika UkSSR [Ukrainian SSR State Committee for the Production and Technical Provision of Agriculture]. The problems of the technical maintenance and repair of heavy trucks which it mentions are urgent and timely.

The republic's agriculture uses 2,630 KamAZ vehicles. The fleet will be increased by 2,050 units this year, totaling 34,100 by 1985.

The repair of these vehicles and supplying spare parts for them have been entrusted to the USSR Ministry of the Automotive Industry and directly to the production association of the Kama motor vehicle plants.

Three motor vehicle centers already are operating in the republic: in Vinnitskaya, Donetskaya and Dnepropetrovskaya oblasts. They are being established in Kiyevskaya, Lvovskaya, Odesskaya, Kharkovskaya and Chernovitskaya oblasts. However, these enterprises have been sited in unsuitable locations and do not have the necessary technical equipment. Spare parts are alloted to them in extremely limited quantities. The problems of delivering antifreeze, lubricating oils and ethyl alcohol have not been resolved.

About 100 vehicles are standing idle every day just on Selkhoztekhnika farms because of the inadequate supply of spare parts and materials. The Irkutsk Motor Vehicle Repair Plant is delivering semitrailers extremely unsatisfactorily, as a result of which powerful truck tractors stand idle for 6 months and more. It is necessary that the USSR Ministry of the Automotive Industry commission enterprises for the repair and technical maintenance of Kama vehicles more rapidly.

Measures have been developed by the UkSSR Goskomsel'khoztekhnika associations to utilize KamAZ vehicles. They provide for the construction of dispensaries, control and technical points and filling stations with consideration of the peculiarities of operation of KamAZ vehicles.

Twenty-two technical maintenance stations specialize in servicing KamAZ vehicles. Production sections for the technical maintenance and repair of vehicle units are being established in them. At all other stations, one-place or two-place stalls [posty] are being set up for KamAZ vehicles. Inspection pits are being extended and stalls are being equipped with sets of tools and accessories for this. Vehicle units also are serviced at specialized sections of stations.

[Signed] A. Ishchenko, deputy chairman, Goskomsel'khoztekhnika UkSSR, Kiev.

/A Vehicle Center for Every Oblast/ [in boldface]

There are 10 KamAZ-5410 truck tractors in our truck convoy. In a month each one of them "winds up" 10,000-12,000 kilometers, and 120,000 to 140,000 kilometers in a year. With such runs it is necessary to perform technical maintenance on the vehicles every month and change the oil, and after a year to change the engine and other assemblies. It was assumed that all these operations would be performed at vehicle centers provided with the appropriate equipment. But here is the trouble: there is no such enterprise at Sumy.

Until recently, our ATP [motor transport enterprise] was attached to the Donetsk Motor Vehicle Center. Now they have transferred it, as well as all motor transport enterprises in the oblast, to the Kharkov Motor Vehicle Center. But it turned out that the latter had not yet begun operation. And vehicles have been left without any repair and technical maintenance at all. Now four KamAZ vehicles are standing idle already. Their downtime is costing the truck convoy a great deal.

We believe that a center for repairing KamAZ vehicles should be established in each oblast. It can be organized in our oblast on the base of the vehicle repair plant of the UkSSR Ministry of Motor Transport in Sumy.

The poor quality of major engine overhaul at repair plants also causes much trouble. A vehicle with such an engine will run no more than 20,000 kilometers. But the same engine, repaired at a motor transport enterprise, "will run" 50,000 to 70,000 kilometers. Why does it turn out this way? The reason has long been clear to everyone. The plant, having turned out an engine, declines all responsibility for the quality of its repair. If you present it with a claim, you generally will receive nothing more. Apparently, the time has come to establish enterprises in the republic to turn out new engines and units on the base of two or three good vehicle repair plants. In fact, it is well known to everyone that a new engine will take the place of five-to-seven which have come out of major overhaul.

There are also complaints for the managers of the Glavneftesnabsbyt /Main Administration for the Transportation, Supply and Marketing of Petroleum and Petroleum Products/. The manufacturing plant's instruction requires that oil be added or changed completely in the KamAZ engine after a definite number of kilometers. But motor transport enterprises have not been provided with it thus far. And it is impossible to use anything else. There have been cases in our truck convoy when vehicles have stood idle without oil for up to 10 days. These are big losses. They cannot be tolerated.

/Signed/ Yu. Ivanov, drivers' brigade leader, and V. Romanov, truck convoy chief, Sumy.

/They Have Been Lost En Route/ /In boldface/

The article "The KamAZ Is Being Towed" correctly speaks of the inadequate provision of spare parts for KamAZ vehicles. Engines, water pumps, injectors, injector nozzles, water pump belts, turn relays /rele povorotov/ and many other items are being delivered especially poorly.

The center's administration is taking steps to reduce vehicle idle time because of the lack of spare parts. Our representatives are going to Naberezhnyye Chelny to get a planned shipment of spare parts for the motor vehicle center. So 52 engines, including 24 new ones, were shipped to us just during October and November last year by the Kama Association for the Production of KamAZ Heavy-Duty Trucks. However, these measures are not producing the needed results. The fact of the matter is that the transport which delivers the spare parts to us often is unloaded before reaching the vehicle center. For this reason, the timely provision of spare parts for enterprises is disrupted. As a result, the vehicles stand idle.

In the same way, 10 new engines were shipped to our vehicle center on 28 April 1979 by the administration of spare parts and maintenance and repair of KamAZ in a vehicle of L'vov ATP 12867. They were all "stuck" in the vehicle enterprise and only on 18 June, after intervention by the Ministry of Motor Transport, were just four engines returned to the vehicle center and the remainder were installed in the vehicles of ATP 12867.

In September the vehicle center was to have received spare parts valued at 14,000 rubles in accordance with a supply authorization /po raznaryadke/, including injectors, injector nozzles, transmissions, clutches, and other parts for which the vehicle enterprise has great demand. These spare parts were delivered by vehicles of the Kiev Motor Transport Base No 5 of the Ministry of Agriculture and have not yet been recovered for us.

One more case. On 29 October 1979, 20 new engines were shipped to us in a KamAZ vehicle of Kiev ATP 12861 from Naberezhnyye Chelny. It is February already, but the engines still are not at the vehicle center. And many vehicles stand idle without them, at times for 2 or 3 months.

At present, over 700 vehicle enterprises of 52 ministries and departments in 13 oblasts of the Ukraine are being serviced by the Tul'chinskiy Vehicle Center of KamAZ. The total fleet is over 4,500 vehicles. All this creates difficulties both in providing spare parts and in the supervision of their use.

A large number of engines break down because vehicle enterprises have been very poorly provided with lubricating materials.

But despite the difficulties, we are creating the best possible conditions for maintaining the KamAZ vehicles. A shop for repairing and checking brake systems is already in operation at the vehicle center and establishment of works to repair running gear assemblies , which will significantly improve the fleet's technical readiness, is being planned.

/Signed/ I. Bondar', manager of the Tul'chinskiy Motor Vehicle Center of KamAZ, Tul'chin, Vinnitskaya Oblast.

> /From the editorial staff:/ /in boldface/ Writers of the responses to the article "The KamAZ Is Being Towed" agree on one thing--it is necessary to establish repair plants and vehicle centers and to improve their supply of spare parts. But we are alerted to the fact that even the centers which are just being organized do not have the necessary material and technical base, and for this reason cannot provide timely, high-quality repair of vehicles. The USSR Ministry of the Automotive Industry must see to it that there is such a base, first of all.

Transport workers have many complaints about the Glavneftesnabsbyt, which is at fault for not providing motor transport enterprises with enough anti-freeze, lubricating and motor oils, and ethyl alcohol. What steps will be taken? The editorial staff is waiting for an answer to this question from the USSR Ministry of the Automotive Industry and from Glavneftesnabsbyt.

8936
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REVIEW OF FEBRUARY RAIL TRANSPORT PROBLEMS

Moscow GUDOK in Russian 5 Mar 80 p 1

[Article: "The Serious Lessons of February"]

[Text] In the past month a highly significant growth in freight haulage was achieved: 18.2 million tons more were dispatched than in February of last year. The plan was fulfilled for ore, automobiles, cement and meat and dairy products. However, the railroaders have every reason for dissatisfaction with the work totals.

Not all of the mainlines fulfilled the general plan for freight haulage. For example, the Donetsk, Alma-Ata and Eastern Siberian Railroads permitted serious shortfalls. However, the main inadequacies in the organization of transport were the underloading of coal and timber, the low level of transfers and the unfulfillment of unloading assignments.

In February the dispatching of timber was carried out according to plan; moreover, the basic failure was on the key timber-carrying roads: the Northern, Sverdlovsk, Gor'kiy, Eastern Siberian and Krasnoyarsk. In the majority of instances, the reasons can be found in the insufficient attention paid to this important freight by the managements of the railroads and even in direct irresponsibility. However else can one explain the fact that on the Northern, Sverdlovsk and Gor'kiy Railroads, which are fulfilling and even overfulfilling the general plan for hauling freight, they could not find several hundred cars loaded with timber?

The primary problem in the organization of coal transport has been and still is guaranteeing the coal-carrying mainlines a supply of empty gondolas. Putting the question in this manner does not remove the responsibility from the management of those roads which serve the fuel basins. However, the more serious claims for responsibility go to the collectives of the mainlines, returning empties, such as the Belorussian, Odessa, Azerbaijan, South Eastern, Trans-Volga and a few others.

Almost the same thing can be said for the transport of liquid fuels. In February the task for loading tank cars was unfulfilled by an average of 800 cars per day. The largest shortfalls were on the Kuybyshev, Western Siberian, Sverdlovsk and Gor'kiy Railroads. On these railroads the tank cars were not used skillfully enough, but more importantly, few of the empty cars on the empties disposition order were returned to them.

The number one reason for all of the failures last month was the extremely unsatisfactory fulfillment of the tasks for transfers. The Ural and Siberian Railroads worked all of last February with a surplus of about 50,000 railroad cars, of which 35,000 were in transit. There is nothing surprising about this--indeed, the transfer of cars in this zone has been about 14,000 cars below that required every 24 hours.

The business relationship between the managements of the Eastern Siberian and the Krasnoyarsk Railroads has not been put in order. Traffic controllers of the Eastern Siberian Railroad still do not understand that with a surplus in the even direction of cars numbering in the tens of thousands it is necessary to send locomotives in reserve. However, although this is perfectly clear, arguments are still going on at the railroads interchange. Because of this, traffic has been greatly slowed all along the Ural-Siberian run from Isil'-Kul' to Tayshet, and the reception of trains through Arkhara has not been set right.

Even the Caucasus zone, particularly the Azerbaijan and the Trans-Caucasus Railroads, has been sounding the alarm from the point of view of the organization of receiving trains. On the former the stock on hand has exceeded the norm by almost 6,500 cars, of which nearly 3,000 contained local freight. And meanwhile, the task for freeing rolling stock remains unfulfilled--the average 24-hour shortfall is 400 railroad cars.

In general, unloading is proceeding extremely slowly. In February only four railroads met the plan--the Gor'kiy, the Belorussian, the Trans-Dnepr and the Kuybyshev. And the management of the mainlines having 3,000 cars above the norm containing local freight continue to rely on inadequate freight-handling resources and ask that the transfer quotas on the empties dispostion order be lowered.

Everything which was mentioned above should serve as a serious lesson. Already this March the volume of freight is increasing in comparison with last month by 15,000 cars per day. Along with the continuously increasing haulage of coal and timber, the level of liquid cargo is growing, and more and more grain will be shipped; moreover, nearly half of it will be shipped on three roads--the Virgin Lands, the Southern Urals and the Western Siberian. It is now necessary to send as many covered [gondolas] as possible, since there is a material shortage of them there.

The opportunities for railroaders to meet the intensified March plan are quite sufficient. It is only necessary to end the disagreements at work and the litigiousness at interchanges, and to struggle against the individual cases of breakdowns in railroad work. Every moment of delay now can reflect on the fate of the plan for the first quarter.

CSO: 1829

RAILROAD

AZERBAIJAN RAILROAD SYSTEM'S CHIEF DETAILS PROBLEMS

Baku BAKINSKIY RABOCHIY in Russian 14 Feb 80 p 2

[Article by F. Kengerli, chief of the Azerbaijan Railroad: "Transport Must Work Precisely So That Cars Do Not Stand Idle"]

[Text] At the November (1979) Plenum of the CPSU Central Committee, Comrade L.I. Brezhnev sharply criticized the work of rail transport, which is not coping with the increased requirements of the country's national economy for freight transportation. The shortcomings about which Leonid Il'ich spoke are also inherent in the Azerbaijan Railroad, and the chief problem among others is the unsatisfactory use of rolling stock.

What is the trouble? The efficiency with which freight cars are used depends primarily on their timely unloading. One must say that because of measures adopted by the Party and soviet organizations and the People's Control bodies, a certain improvement has been achieved in the organization of car unloading by the republic's industries. While in 1978 the average idle time for cars on our railroad was 7.11 hours, it was reduced to 6.31 hours in 1979. A particularly noticeable result was achieved in December of last year, when the average idle time was 4.89 hours. Many enterprises of Goskomsel'khozteknika [State Committee of the Agricultural Equipment Association], the ministries of the food industry and industrial and agricultural construction and certain other agencies have accelerated car unloading.

However, the question of unloading still remains the most acute. Last year on industrial sidings in Azerbaijan, the average idle time for cars exceeded the norm by almost 3 hours. In all, more than 320,000 cars were delayed by more than 3 million hours beyond the established norm. Because of this, the railroad lost more than 30,000 cars, in which it would have been possible to transport almost 2 million additional tons of freight for the national economy.

One must acknowledge that the railroad workers are also guilty of similar mismanagement. We have still not set up adequately precise and timely information for the consignees concerning the approach and arrival of freight addressed to them. To some extent, this drags out the organization of unloading operations.

This happens when the cars which have arrived are delayed at stations while waiting to be switched to the freight docks. We also permit losses because cars with freight are separated and dispatched in an untimely fashion at the receiving station. As was justly noted in the article "Car being unloaded," published 6 January by BAKINSKIY RABOCHIY, the railroad workers still lack adequately close intercommunications with ministries, agencies and consignees. We can no longer accept miscalculations of this type, and now the most decisive measures are being adopted to eliminate the present shortcomings.

It must also be said that in recent years much has been done on the railroad to increase the carrying capacity of the mainline. However, the engineering status of individual units of the transport conveyance does not as yet correspond to present-day requirements. Many stations, such as the Norashen station, about which we wrote in the material "Warehouses on wheels" (BAKINSKIY RABOCHIY, 30 December 1979) have still not received the requisite development, a fact which cannot help but disturb the rhythm of freight operations under freight-flow conditions which grow from year to year. A set of engineering measures, the realization of which will insure normal operation, is being specified as one of the prospective plans for development of the railroad.

And, nevertheless, let us say straightforwardly, the chief losses are because of the consignees. I will refer to concrete facts. Last year, the average daily rate of unloading on the railroad was 84 percent that of the plan. Each day hundreds of cars stand idly by waiting to be emptied, and on days off and holidays, unloading reaching only 72 percent of the daily plan. And it is totally unpermissible that unloading is being performed in just one shift by an overwhelming majority of plants, and during daylight hours at that, whereas a transport conveyance functions with equal intensity both day and night.

The Sumgaitskiy Superphosphate Plant set a record of sorts last year. With the norm being 8.17 hours, they kept cars 28.36 hours on the average: more than 16,200 cars stood unproductively idle here more than 351,000 hours. For this, the plant was fined R 450,000. Or let us take the Kyurdamirskaya Interregional Chemical Products Base. With a norm of 3.22 hours, they held the cars 122.27 hours on the average. Among those enterprises significantly delaying cars for unloading, the following should be singled out: Sumgaitskiy Synthetic Rubber Plant, Grain Products Combine No. 1, the Furniture Assembly Combine, the Baku Refinery imeni 22nd Party Congress, the Baku Tire Plant, the Machine Building Plant imeni Musabekov, the Baku Margarine Plant and enterprises of "Kaspryba." The BAKINSKIY RABOCHIY also related facts in correspondence for Mingechaur concerning idle time because of lack of organization "What does an hour of idle time cost?" (25 January).

It would be incorrect, however, to think that cars on the sidings are standing idle solely as a result of disruptions of the rhythm of unloading during the course of a day or on holidays and days off. There are other causes. The main one is that many plants perform unloading in the old-fashioned way, manually. Comrade L.I. Brezhnev spoke on the importance of strengthening the mechanization of loading and unloading operations and of elimination of heavy manual labor in his speech at the Plenum of the CPSU Central Committee. As practice shows, mechanization permits productivity of the labor of loaders to be increased by a factor of 7-10. This is the resource for accelerating car unloading! Unfortunately, it is being put into effect extremely slowly. Therefore, such cargoes as Portland cement, salt, building materials, mineral fertilizers, glass containers, mineral water, wood materials, reinforced concrete posts for vinyards and many other items are frequently unloaded manually.

By the way, about those reinforced concrete posts. They are shipped in bulk instead of in bundles as they should be. As a result, the cargo capacity of the car is not totally used, and large numbers of them are damaged during the unloading. The posts which are unserviceable remain on the cargo docks and make unloading of other cargo more difficult.

More than 70 percent of the freight operations on the railroad are performed on industrial sidings. Naturally, their condition should correspond to technical requirements. Only in this case can the cargoes be brought up and removed from the cars in a timely fashion. The rhythm with which they are emptied depends on this fact. But the condition of most of the industrial sidings in the republic leaves much to be desired; many of them have been reduced to a state of breakdown whereby it is unsafe to deliver rolling stock to their destination.

Let us take, as an example, the railroad tracks of the Bagramtapinskiy Sand and Gravel Pits of the Ministry of Construction materials. Not long ago (9 January), 4 gondola cars were derailed when loaded cars were being pulled over them. Whole days were required for righting them and restoring the track. As a result, 37 cars stood idle here more than a day. On 15 January 3 cars were derailed on the siding of Reinforced Concrete Casting Plant No. 8 of Glavbakstroy [Main Construction Administration of Baku]. Thirty-five cars loaded with gravel stood idle waiting to be delivered to this enterprise at the Kishly Station for this reason.

The sidings of the Mingechaurskiy Gravel and Sand Pit, the Karadagskiy Portland Cement Plant, the Sumgaitskiy Additives Plant, the Baladzharskiy Reinforced Concrete Castings Plant No. 6, the Kishlinskiy Reinforced Concrete Castings Plant No. 2, the Ali-Bayramlinskaya State Regional Electric Power Station, the Tauzskiy Portland Cement Plant and many other enterprises are in poor repair.

Many difficulties also arise when several plants are connected to the same siding. For example, at the Kishly Station, the Asbestos Slate and Ceramic Goods Combine has its own siding. Sidings from the Administration for the Supply of Materials and Equipment of Glavbakstroy, Base No. 2 of the Agricultural Equipment Association, the BREMZ plant, gorkholodil'nik [city of refrigeration plant], the Machine Building Plant imeni Musabekov and other enterprises connect with it. And if, let us say, a derailment should occur en route to the combine, the freight docks of the other organizations will also be blocked. Thus, the cars will be sentenced to lengthy idle periods. Similar type sidings are not only at the Kisnly and Baku-Tovarnaya Stations, but in Sumgait, Kirovabad and at other critical stations on the railroad.

The inadequate development of freight docks at plants is one of the main causes of car idle time. With the years, industry is expanding, freight flow is increasing, but the economists are not concerned with improving matters with regard to warehouse capacities, freight receiving points, the development of track or increasing switching facilities.

If we look at just the Baku Flour Mill No. 2. As was the case many years ago, only 4 cars at a time may be brought up to this plant's freight docks. Moreover, unloading is slow here. In December of last year, it was 11 cars per day on the average, while about 12 additional cars stood idle every day waiting to be unloaded.

The Baku Wineries Nos. 1, 2, Baku Refrigeration Plant, Port of Baku Refrigeration Plant, the Additives Plant, the Baku Refinery imeni 22nd Party Congress, the Plant imeni Karayev, the Tauzskiy Portland Cement Plant, the Reinforced Concrete Castings Plant No. 6 and many others are among those enterprises which are not developing their freight docks.

The idle time of cars being unloaded causes a great loss to the state. Shipment of freight for the national economy, both within the republic and beyond its borders is a direct function of this idle time. It frequently happens that the plant management asks the railroad workers to accelerate the delivery of empty cars to them for loading their finished products, forgetting that the railroad does not receive empty cars, that it comes only after cars which have arrived or are turning around within the republic have been unloaded. Consequently, both the railroad workers and the workers in organizations to which freight is shipped should be interested in accelerated unloading to the same extent.

Without fear of repeating myself, I will say that workers of the republic's steel highway, having great resources at their disposal, are displaying unforgivable slowness in their use and in eliminating present shortcomings. Station managers at times show formalism in establishing business contacts with consignees and consigners, a fact which cannot help but affect the course of freight operations and cause delays in cars for loading and unloading. In other words, the railroad workers are doing their bit to contribute to the idle time of rolling stock over and above the norm. Here we are obligated to do everything to achieve a radical break in this affair, to increase the level of organizational activity.

We are placing great hopes on the railroad workers' initiative and their creative approach to the matter. Having developed socialist competition with interacting groups, with the collectives from plant transport shops, they will certainly achieve reductions in car idle time at cargo docks. We are also hoping that around-the-clock unloading of cars arriving on their grounds will be set up at plant and organizational collectives. We see the road to increasing the efficiency of rolling stock use and improvement of all of the operations of the republic's steel highways to lie in the most rapid realization of all of these measures, even today.

But now it is also necessary to think about tomorrow. Both the railroad workers and managers of plants and organizations should prepare and insistently put in practice a precise program for the technical development of the transport industry. Sidings and freight docks must be developed, and mechanization of loading and unloading operations must be broadly incorporated. All of this will require definite expenditures, but they, these expenditures, will be repaid with interest in the shortest of times, and they will permit freight delivery to be accelerated and the transportation needs of the republic's national economy to be more completely satisfied.

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RAILROAD

IMPACT OF BAM ON PEOPLES OF THE NORTH STUDIED

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[Article by Vladimir I. Boyko, doctor of philosophy, chief of the Department of Sociology of the Institute of History, Philology and Philosophy of the Siberian Department of the USSR Academy of Sciences, author of works on the problems of the social development of indigenous peoples of Siberia and the Far East: "BAM and the Peoples of the North"]

[Text] The Baykal-Amur Mainline passes through territory inhabited by indigenous peoples of the north of Siberia and the Far East. The economic development of this zone will, without doubt, exert an effect on the economic, social and cultural development of the Evenki, Nanaytsy, Ul'chi, Nivkhi, Udegeytsy, Negidal'tsy and Orochi, who number about 25,000 in all.

We are thus speaking about a relatively small group of peoples settling in new areas as individual, primarily compact, national groups over the vast territory of the BAM zone. It is difficult to suppose that a given group in which less than half of the population is gainfully employed can seriously effect estimates of the balance of labor resources. Therefore, in working out and realizing a general plan for the economic development of this territory, it is necessary to accentuate the social development of the peoples themselves, the nature and the directions of possible changes in the various spheres of vital activity and the development of an optimal tempo for the process of internationalizing their way of life.

At the start of socialist transformations, the small peoples of the north of Siberia and the Far East essentially preserved their archaic forms of economy, life style, culture and social relationships. As was the case 100 years ago, small-scale extractive industries were the basic ones: hunting, fishing, collecting, as well as reindeer raising in extremely primative forms. The majority of these peoples did not know weaving at the start of the twentieth century, and many of them did not know pottery. They led a nomadic way of life.

The specific character of occupations and resettlement did not promote the overcoming of. And although the union of the northern regions to Russia included their economy in the common Russian market and exerted a progressive effect on the development of the small peoples of the region, broad transformations in their life began only with the years of Soviet power.

Over a relatively short period during the life of one generation, a qualitative jump occurred in the social development of the peoples of the north--from the most retarded forms of social development to modern civilization; from primitive forms of economy and life style to socialist forms. The Leninist national policies of the Soviet government, which stimulated the development of all facets of the small peoples vital activity, lies at the base of these changes. Moreover, the solution of common problems as socialist society was being built was combined with a search for concrete forms and methods of social development, beginning with the specific character of each group of peoples and consideration of their interests, a fact which insured that the measures which were carried out were highly efficient. In the areas of politics, for example, elements of the traditional communal form of self-government were combined with new forms of governmental power which provided for a gradual transfer to the socialist state system. In economics organizational forms such as integral cooperation were used first, and then the simplest production associations were transformed in the 1940s into the higher, the artel form of cooperation with the collective form of property inherent in it. In the area of cultural transformations, the creation of written forms of the native languages, the assistance of volunteer teachers of other nationalities in eliminating illiteracy, cultural groups, etc. played an important role. In a short time 13 nationalities received a written language, alphabets were created, textbooks were written, books were translated and newspapers began to be printed in the native language; cadres from the national intelligentsia represented today primarally by teachers, medical workers and workers at cultural and educational establishments were formed.

Of course, it was necessary to make these radical transformations taking the level of development, the particularities of each people into account, permitting no crude shattering of the customary tenor of life. The development of certain sectors of production or others were examined from these positions as profiling areas. The economic expediency of these sectors emerged as a coordinated task. Preservation of the customary settlement region and the traditional types of occupations and sectors of production promoted a smooth and painless shift to the new forms of community.

Today the industrial development of the traditional settlement areas of the small peoples of the north is entering a new phase. The construction of the BAM, the creation of large territorial-production complexes is exerting a tremendous effect on social and other processes, the regulation of which is becoming noticeably more complex.

First of all, the problem of orienting the indigenous populations to the types of occupations and areas of production is extremely difficult. It is deceptive, of course, to maintain an orientation toward the traditional types of occupations. The use of skills and the experience of the indigenous population for further raising and developing the traditional sectors, particularly reindeer raising, in connection with the need to establish a local food base, is entirely natural and well-founded. However, when the population is oriented only toward traditional types of occupations, the danger of reducing internal stimuli for personal development may arise, for the narrow spectrum of traditional skills and the weakly progressing content of traditional labor do not stimulate one to the everyday need to improve ones qualifications, to broaden the scope of vocational knowledge.

The unified program of the modern secondary school is laying the foundation for knowledge which is adequate to master any profession. In connection with this, in specific segments of the populace, particularly among the young, one may detect the presence of an increasing contradiction between the level of education, the living and professional orientations and the content of work being performed, which does not require the use of the knowledge one has acquired to the fullest extent. And although drastic measures are presently being taken to change the technology and to saturate the traditional sectors in particular with new equipment, the professions of reindeer raising and hunting are slowly being filled with a new content because of their specific nature. In order to be a specialist in this sphere of activity, one must possess the skills and devices of the preceeding generation. Industrial labor, moreover, connected with equipment, not only develops the capability, but it systematically stimulates the person to improve, to expand his professional knowledge as well.

One must also note the differences of a psychological nature. In the process of studying at a school (a boarding school) the young people of the indigenous nationalities not only acquire new knowledge and expand their horizons; they also develop a need for extensive daily intercourse, participation in the life of a large collective, the use of the cultural facilities afforded by a large populated area. This behaviorial stereotype, which was formed at the beginning of labor activities, cannot be realized of itself under the conditions of isolated reindeer raising, for example. Small labor collectives (5-7 persons, 2-3 families as a rule), the isolation from the main populace for practically the entire year, the extremely restricted possibilities for use of a spiritual culture--i.e. the conditions which recently satisfied the older generation--become unacceptable to the younger one. Now, orienting the young people toward such types of occupations, it is necessary to resolve the problem of a cardinal change in the technology of traditional types of labor, developing them to the level of industrial work.

During the years of Soviet power, the small peoples of the north covered a long road from a homogeneous society in a social-professional scheme, based on primitive economy and undeveloped productive forces, to a society with a broad social-professional differentiation. During this period the national detachments of the collective-farm peasantry, the intelligentsia and the working class were formed. However, we still cannot say today that the social-professional structure of the small peoples of the north is of the same type as the structure of the entire population of the administrative region. The industrial detachment of the working class is just now being formed among individual peoples (including the Evenki of the BAM zone). Therefore, the known arguments against an unambiguous orientation of the entire population of an indigenous people toward the traditional types of occupations also arise in connection with the need to solve the problems of liquidating social-professional disproportions and forming a social-professional structure for an indigenous Siberian population which is of the same type as the structure of the entire population of the region.

One may, and one must, develop the traditional sectors to the level of industrial labor, and it is necessary to solve this problem while the plan for development of the BAM zone is in progress. And although realization of this goal will obviously require a certain amount of time, the economic and social results will be indisputable. At the same time, a definite segment of the population (the young people as a rule) is already prepared to perform complex professional roles today. Construction of the BAM is creating and will create a constant demand for a qualified work force, and those segments of the population which have been prepared will unavoidably become oriented toward the new types of work, toward the performance of more complex labor functions. This process is objective.

However, extreme haste, forcing the conversion of indigenous peoples to new types of labor is also undesirable. The reorientation of the individual toward new values which are still strange to him is inevitably accompanied by harsh adaptation to the new types of work and the life style. Consideration of the pecularities of the adaptation process is called upon in management practice to facilitate the successful surmounting of these difficulties.

And it is still necessary to pay attention to one more problematic situation. The flow of people of other nationalities into regions traditionally settled by these small peoples is increasing sharply in connection with the development of the BAM zone. Multinational labor collectives and settlements are being formed, the structure of intercourse among nationalities is changing significantly. Closer contacts and more broad-based intercourse lead to accelerating exchanges of values and exert a positive effect on all spheres in the life of the small peoples. It is at the same time necessary to consider the possible negative effects of these processes as well. Will not a premature "dispersion," a "resorption" of the national community occur? Will not its consolidated status be destroyed; will not the level of national conscience, which plays a certain role in the process of "joining in" with collectives of other nationalities, be lowered?

Thus a search for a strategy, for tactics, forms and methods for managing the developmental processes of the small peoples of the north is today generating an entire set of problems which must be studied. The new production-economic conditions are exerting a revolutionary effect on the nature of various social processes, which are becoming more dynamic, and the number of social phenomena requiring deeper analysis is growing. All of this has made necessary wide, comprehensive research, the results of which lie at the base of recommendations made for social management practices.

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A study of social processes and tendencies in the development of the peoples of the Nizhniy Amur region, associated with the industrial development of this region, was performed by sociologists of the Institute of History, Philology and Philosophy of the Siberian Department of the USSR Academy of Sciences beginning in 1967. The choice of the region to be studied was determined basically by the extent of concentration of indigenous peoples. The investigation was performed mainly in Khabarovskiy Kray, particularly in Komsomol'skiy, Nanayskiy and Amurskiy Rayons where about 80 percent of the Nanays live, and in Ul'chskiy Rayon (80 percent of all Ul'chi).

The isolation of several peoples into a single group as an object for an over-all study was possible due to their economies, their basic types of occupations, their life style, the natural environment and the fact that the inhabited regions were of the same type. These groups of people occupy a certain definite place among the other small peoples of the north, a fact which is explained by better natural and climatic conditions, types of work (particularly fishing) which insure the possibility for concentrating people into large settlements and for a protracted social life with other peoples and for a more intensive industrial development of the region. New industrial cities and workers villages, the effect of which is being examined in all spheres of life, appeared in regions in which the peoples of the Nizhniy Amur were settled by the 1930s.

The territorial mobility of the peoples of the Nizhniy Amur has increased sharply: the relative significance of the urban population increased to 27 percent by 1970, and the rates for the increases during the years 1960-1970 are much higher than the national average throughout the USSR.

Until recently the Nanays and Ul'chi resided mainly on kolkhozes specialized for fishing. By the beginning of the 1970s, the relative importance of nontraditional sectors of production, e. g. lumber processing, fur breeding, livestock raising etc. increased as the relative significance of fishing declined. Changes in the economic life of the kolkhozes exerted a significant influence on the redistribution of the rural population in various sectors and spheres of production, and it increased the flow of migrants to the cities and worker settlements.

The orientation toward new and more highly skilled labor is an important stimulating motivation for movement to the cities. About 10 percent of the Nanays working in rural locales consider that their level of education is higher than that required for the work they do. Certain categories of young people particularly sharply sense the discrepancy between the nature of the work they perform and the level of their education. Half of the young people consider that they do not find application of their knowledge, and one fifth note that the knowledge they possess can only be partially used.

The attraction of the city was fixed on the basis of a number of other indicators as well. More than one half of the potential migrants planned to move to the city; 10.8 percent of the village residents would like to spend their vacation time "just in the city," 23.4 percent in traveling from city to city; more than half of the Nanays would like to see their children as residents of a city in the future.

The practical realization of high value orientations toward the city depends on many factors, including the location of the city (its accessibility), on the intensity of contacts between village residents and city dwellers and the actual possibility for obtaining work and living quarters.

Today every sixth Nanaian family has a son or daughter in the city, and almost every family has relatives (there). This makes for adequately stable contacts since the traditional blood ties are very strong.

Social mobility also increases along with the growth of territorial mobility; a change in social and professional structures occurs and new professional and social groups spring up.

The broad possibilities for selecting an occupation which are presented by the national economy of Khabarovskiy Kray are adequately used by the indigenous peoples of the Nizhniy Amur. Thus among the Nanays who are rural residents, the part of their numbers employed in kolkhoz and sovkhoz production is 62 percent, among the Ul'chi, it is 42.6 percent. The numbers employed in industry, construction, transport and communications and trade and supply are 18.7 and 21 percent respectively; those in the area of management, culture, public health services and national education are 17.2 and 33.9 percent respectively.

Upon examination of the occupational-skill structure of the rural populace, the high relative importance of workers engaged in intellectual pursuits attracts one's attention: 21 percent among the Nanays and 24.6 percent among the Ul'chi. This powerful detachment of rural intelligentsia continues to expand, and the relative importance of highly skilled white-collar workers in the national villages of the Nizhniy Amur today has reached a level which is average throughout the USSR today.

The young people have a higher relative significance in groups employed in intellectual and highly skilled work. The traditional professions of fisherman and hunter attract young people less. For example, there is no one less than 30 years of age among the hunters, and 71.7 percent are over 50. The rather high relative significance of young people in the group of unskilled workers attests to inadequately broad possibilities for choosing an occupation at the start of ones labor activities. These people realize their professional interests in the tumultuously growing cities and workers settlements within their traditional settlement regions.

The urban population of the peoples of the Nizhniy Amur, which are employed, is mainly represented by two social groups: workers (86.1 percent) and white-collar workers (12.6 percent). The relative importance of white-collar workers is greater among women (15.5 percent, as opposed to 8.6 percent among men). The urban inhabitants of the peoples being studied are employed in the most diverse sectors of the national economy. They are represented to the greatest extent in industry (32.8 percent), construction (20.9 percent) and transport and communications (12.6 percent).

It is difficult to overestimate the role of the city in the social-professional evolution of the peoples of the Nizhniy Amur: They mastered new, highly skilled professions, received regulated work habits and satisfied their requirements for work of one type or another.

The tempos of vertical social-professional mobility grow because of special preparation before working, particularly in the group of persons up to 30 years of age, a fact which facilitates the formation of a social-professional structure of the peoples of the Nizhniy Amur having the same structure as the entire population of the USSR.

The preceeding points permit us to conclude that formation of an industrial complex within the center of a traditional settlement plays an exceptional role in the development of the peoples of the Nizhniy Amur. New value orientations toward the type of work and increased requirements of the indigenous population, particularly the youth, can be satisfied in their traditional settlement locations. At the same time, hunting and fishing as a hobby for specific groups, the river, with its attractive force, the possibility for contacts with relatives, all of this creates an atmosphere in which a change in the professional orientation and the new living conditions in the city does not cause great psychological tension.

An analysis of the development processes of the peoples of the Nizhniy Amur[1] provide us with the basis for a number of conclusions and proposals which may be used in managing the social development of the Evenki of the BAM zone. But if the developmental tendencies of the Evenki associated with the appearance of industrial, transport and other developments, the growth of settlements and cities within their traditional settlement zone are to be identical to the tendencies in the development of the peoples of the Nizhniy Amur, the nature of the course of these processes will be specific.

First of all, the structure of the production sectors, the selection of occupation types in the Evenkian villages is much narrower than in the Nanaian; this restricts the professionalization and the formation of new value orientations. There are also significant differences in the structure of the multinational community. The Nanaitsy, for example, live primarily in villages with a population which is predominantly of another nationality (more than 60 percent), whereas the Evenki of Amurskaya Oblast reside in villages with a smaller population of other nationalities (up to 35 percent). It is natural that under these conditions, the exchange of values will occur less intensely.

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[1] For more detail see V. I. Boyko. Sotsial'noye razvitiye narodov Nizhnego Amura [Social development of the peoples of the Nizhniy Amur]. Novosibirsk, 1977.

The tempos of urbanization of the Evenki in the period between the censuses of 1959-1970 were the slowest in comparison with the other peoples of the north. The processes of movement of the Evenki into worker settlements and cities, their mastery of new types of occupations corresponding to increased requirements are just beginning. However, these processes will apparently proceed more intensely than for the peoples of the Nizhniy Amur in connection with rapid construction.

The "explosive" nature of the appearance of new settlements in immediate proximity to national villages and, occasionally, right within them (Zolotinka, Yakutskaya ASSR) will naturally compress the "joining" periods, and it will make adaptation to new labor forms and the new life styles more complex. The reduction of reindeer pasture lands and small-scale industry resources will require development of new sectors and the search for new technological and organizational decisions associated with the significant remoteness of the reindeer pasture lands from the settlements.

All of the preceeding has made necessary special studies of practically all spheres of the vital activity of the Evenki and the development of practical recommendations on this basis which will take into consideration the peculiarities which are present.

A special expedition for the collection of mass information on the topic "The Effect of BAM on the Social Development of the Evenki", which was organized at the end of 1976, studied the social opinion of various segments of the Evenki population concerning a broad spectrum of problems placed on the agenda in connection with construction of the BAM in their traditional settlement region. The study was conducted in all 5 national villages of Amurskaya Oblast (Pervomayskoye, Ust'-Urkim, Ust'-Nyukzhe, Bomnak and Ivanovskoye) and ne settlement in Yakutskaya ASSR, Zolotinka.

The entire working-age population, both those employed in social production and those who are unemployed[2], were examined in the populated areas which were mentioned. Diverse sociological information reflecting the status and the tendencies in the development of social-professional, demographic and educational structure of the indigenous population; the level of development of the spheres of labor, culture, living conditions and intercourse; the peculiarities in the use of cultural and spiritual values; the social conscience, the structure of value orientations; the requirements of various social-demographic population groups for specific types of work and the value orientations in the areas of culture, way of life and intercourse were assembled as a result of the expedition's work.

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[2] The development of new and the adaptation of available methodologies was performed by the Sector for Comprehensive Research on Problems in the Development of Indingenous Peoples of Siberia and the Far East of the Institute of History, Philology and Philosophy of the Siberian Department of the USSR Academy of Sciences. The following methodologies were used in the process of the expedition's work: the household survey questionnaire (information collected in the 6 inhabited areas on 2532 persons); kolkhoz and sovkhoz accounts (the economic status of the economies of the national groups); cultural and domestic conditions (information collected in 6 villages concerning 21 parameters); "The Rural Resident Questionnaire"

The results of the analysis are set forth in the account to the Presidium of the Siberian Department of the USSR Academy of Sciences "The Social Development of Indigenous Peoples of the North under Conditions of Construction of the BAM" and provided the basis for measures insuring the most effective development of the small peoples of the north, measures which were specified by a comprehensive socio-economic plan for development of the BAM zone. In this article, we will present only certain data, generalized evaluations, opinions, relationships, orientations and life plans of the Evenki which were revealed during the examination and the results of the processing of statistical information.

The Evenki of the central zone of the BAM (about 2200 persons) are settled in compact groups in the 6 settlements named above; the relative importance of the indigenous population in each of them is 65 percent on the average, the remainder being Russians. Within the large area which was studied, there are 52 percent Evenki single-nationality families, 21.5 percent Russian families and 10.7 percent mixed (12.7 percent are singles).

Among the Evenki of working age (including students in secondary schools), 65 percent are employed in social production, as are 83 percent of the Russians. Among the Evenki as a rule, fewer second members of the family (housewives) are engaged in social production.

The kolkhozes and sovkhozes on which work 66 percent of all of the employed Evenki population and 35.6 percent of the Russians are profiling establishments. During the period 1971-1975, reindeer raising dominated the structure

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(interview), 352 Evenki and 187 Russians residing in the same settlements examined; "The Expert's Questionnaire", 60 interviews; "The Clinical Interview", (tape recordings of conversations with 12 persons); "Schoolboy's Questionnaire" (the professional orientations of schoolboys) - 5 schools; "The Teacher's Questionnaire" - 124 persons; library cards from rural libraries - in 3 villages; accounts or rural aid stations - in 3 villages; tests and sociometric surveys - students at 5 schools.

of commodity production of the ethnic kolkhozes and sovkhozes (Amurskaya Oblast) (47.1 percent). The relative importance of hunting products was 14.8 percent, that of fur raising was 11.2 percent and that of other occupations (logging and private construction) was 23.5 percent. Fishing, agriculture and livestock raising are poorly represented (3.4 percent in all).

In 1975, 70.4 percent of the total income was provided by reindeer raising. The relatively high profitability of reindeer raising is explained by the small number of people employed in this sector. The average annual profitability level from hunting is small--14.2 percent in 1971-1975. The headcount of caged fur-bearing animals is small, but in the 15 years preceeding our study, it increased by 20 percent.

Physical laborers composed 75.9 percent of the employed indigenous population (47.1 percent of the non-indigenous population). Skilled workers (equipment operators and those associated with operation of machinery) comprise 1.7 percent of the indigenous population and 14.5 percent of the non-indigenous. These differences arise because reindeer raisers are classified with workers in nonmechanized labor. Specialists in the sphere of material production are 2.0 and 4.6 percent, respectively, and specialists in the sphere of nonmaterial production are 7.4 and 19.7 percent. The relative significance of workers in medical establishments and soviet and social organizations is identical.

The relation to ones work was measured in its concrete form through expressed satisfaction. The majority of Evenki (78 percent) and Russians (80 percent) are satisfied with their work. In the group of agricultural specialists employed in traditional sectors, the degree of satisfaction is the greatest. It is also high among other workers in these sectors (81 percent). The lowest satisfaction with ones work was in the group of unskilled laborers (in this group 28.4 percent of the people have a specialized secondary education, "excessive" for the given type of work). Among those dissatisfied with their work, 6.4 percent are unhappy with their wage, 41.9 percent consider the work uninteresting. Among those who had received a specialized education (including courses), 27.8 percent had not worked previously at this profession. 47.5 percent of the Evenki consider their work suitable if it is not beyond the village limits.

One-quarter of the employed Evenki population (2/3 of them unskilled laborers) expressed an intention to change their job. The potentially most mobile people are white-collar workers (0.48) and physical laborers (0.29) (the mobility coefficient is the ratio of those desiring to change their job to the total group); the least mobile are highly skilled white-collar workers. One-half of the working Evenki associate the possibility for changing their work with construction of the BAM.

A process of reorientation toward nontraditional types of occupations is in progress among the Evenki, particularly among the young people.

70.4 percent of the 8th-grade Evenki are oriented toward finishing 10 grades of a nonspecialized secondary school. 66 7 percent of the Evenki school children intend to continue their studies after completing secondary school. At the same time, 37 percent of Evenki upperclassmen are expressing a desire to work on construction of the BAM after finishing school. The primary motive by which they are guided is the urge to make their contribution to a common task for the entire people (71 percent of the responses).

An analysis of the relationship of the "new" and the "traditional" in the life plans of teenagers shows that this relationship has been established in favor of the "new". Just 18.0 percent of the students in the 8th and 10th grades talk about their adherence to a traditional way of life, whereas 45.3 percent of the 8th-graders and 57.3 percent of the 10th-graders are oriented toward a way of life associated with industry, cities and buildings.

The processes of internationalization of the elements making up the Evenki way of life are being intensified as a result of the large flow of migrants from various corners of the country for construction of the BAM route. The significance of cultural values in the general structure of their needs is increasing particularly noticably. Thus, among the Evenki intending to change their place of residence, 23.8 percent are not unsatisfied with the cultural and housing conditions (35.7 percent of the Russian respondents indicated these motives for migration).

The growth of material well-being and the cultural level of the Evenki promotes the development of diverse forms of social activity of all segments of this ethnic community. 42.0 percent of the Evenki who were queried responded that they are employed in civil work.

One may judge the life plans of the Evenki in the BAM zone by the data of potential migration. An analysis of the intent to move, the directions, motives and structure of the possible migration flow serves as a basis for a conclusion about the nature of the requirements, the level of satisfaction with concrete conditions, the formation of new value orientations.

Eighteen percent of the Evenki (mainly 20-24 years of age) expressed the intent to change their place of residence; 41.2 percent of those with 10-11 grade educations have a clearly expressed orientation toward the city. In second place is the group of workers with higher and secondary specialized educations. The work motive emerges as the dominating motive for possible migration, about 40 percent ("unsuitable" work--19 percent, "poor pay"--12.7 percent, "no work"--8 percent). 72 percent of the people who indicated this motive are 20-29 years of age. 56 percent of the potential migrants who are not suited by their work have a secondary specialized education or have finished a vocational-technical school.

Thus, the youngest, the most highly educated part of the Evenki population, expresses an uneasiness associated with inadequate possibilities for satisfying their increasing requirements (particularly at work), and is "prepared" for a possible change of place of residence.

66 percent of the Evenki in the villages which were studied anticipate improvements in living conditions on the whole or in certain regards in connection with construction of the BAM. The Evenki have lower evaluations associated with alarm over the future of the environment and the status of traditional forms of occupation, particularly reindeer raising. All of the reindeer raisers who were questioned foresee worsened possibilities for developing reindeer raising.

In other respects, the Evenki associate optimistic anticipations with the arrival of the BAM. 61 percent of the Evenki are anticipating improvement in supply and domestic services, and only 9 percent foresee worsening; 33 percent of the Evenki anticipate improvement in the possibilities for education of children, and 1.6 percent expect worsening; 26 percent of the Evenki expect an increase in income and the level of material well-being, while 0.4 percent expect worsening, etc.

* * *

An analysis of the information which has been collected permitted us to draw the following conclusions, which are the basis for development of a strategic plan for managing the social development of the Evenki in the BAM zone. The Evenki of the central zone of the BAM are at that stage in their development when orientation toward new types of work, increased requirements in the area of material and spiritual culture and everyday life can be satisfied much more effectively at the present time. They now have at their disposal the higher technical-economic, production, cultural and domestic potentials of the given region. In selection of the optimal variant of a union of traditional and nontraditional types of occupations as profiling occupations for one group of the population or another, the determination of tempos, the volume and direction of migration (urbanization), a differentiated approach is necessary. Isolating the segments of the population which preserve an orientation toward the traditional types of occupations and the segments of the population which are oriented toward new forms, the management bodies can take a concrete situation within the sphere of production for each ethnic population more effectively.

The development of traditional sectors of the economy, the need for which was expressed by more than half the Evenki population, should be based on a fundamentally new organizational and technical-industrial basis. It is necessary to substantiate the economic expediency of the traditional sectors, the extent and the nature of their participation in formation of a local production base, the need for developing new hunting grounds and new reindeer pastures as compensation for unavoidable losses associated with construction of the BAM with the aim of including the traditional sectors of the economy in the total production complex which is being formed in the BAM zone.

The development of new natural complexes with the aim of expanding the traditional sectors of the economy should not be accompanied by transferance of ethnic settlements or even parts of them (the organization of kolkhoz and sovkhoz divisions) from the BAM. An absolute majority of the population surveyed, and practically all experts, have expressed such an opinion. This would contradict the process of concentration of a rural population in larger formations with a broad infrastructure and greater cultural potential which has been observed everywhere; it would worsen the domestic and cultural conditions and, consequently, would retard the rate of social and cultural development. It is necessary to remember that a relatively small part of the Evenki population, primarily people of advanced age, is employed in reindeer raising proper. The young people are not oriented toward reindeer raising, and they associate their work plans with the BAM.

In connection with this, it seems expedient to practice the conversion of shepherds and reindeer raisers to a brigade-shift work procedure (the duty-shift method) more broadly; to build stationary field camps where it is possible with the necessary domestic and other outfitting along the route of the reindeer herd where possible; to take measures to expand the preparation of reindeer-raising specialists, livestock experts and veterinarians, as well as to organize special divisions in agricultural vocational schools (radio operators, reindeer raisers, motor mechanics, etc.). Make special selections from among the Evenki youth for these divisions.

The industrial development of the resources of the BAM zone requires careful treatment. It also requires that various measures be taken to preserve the raw material base of the small-scale industry economy, the fishing grounds and other biological resources of the taiga.

It is advisable to organize various national industries on a small scale, particularly those associated with processing the products from reindeer raising on farms so as to improve the economic position and increase the rate of employment of the population, particularly the women. Teaching the applied arts in schools will promote the succession and preservation of elements of the national culture.

Considering the increased orientation of the Evenki population (particularly the youth) toward non-traditional forms of employment, it is necessary to expand their possible selection right within the ethnic village, to specify the development of new production sectors associated with the requirements for construction of the BAM. The growth of the economic potential of the ethnic villages should be accompanied by the development of their infrastructure. All of this will aid in satisfying the increased requirements of the population and stabilizing it in their customary region.

During preparation of skilled work cadres for construction, certain supplimental conditions, making it easier for the youth of the indigenous nationalities to acquire a new trade and find their first job, to obtain housing, etc., must be anticipated, a fact which will simplify adaptation of the indigenous peoples to the new forms of work and life style.

Industrial development of the traditional settlement regions of the small peoples of the north in association with construction of the BAM to any extent will indisputably accelerate the integrative processes in all spheres of life. Moreover, it is difficult to assume the simplicity and rapidity of the adaptation of these peoples to the new conditions, but its positive social effects are unquestionable.

Management of the social processes in the development of the peoples of the north associated with the industrial development of the BAM zone requires further systematic analysis of the nature of the social and professional mobility, the nature of contacts with populations of other nationalities and the mechanism by which indigenous peoples enter into multinational labor collectives.

Solution of the problems of the further development of the small peoples of the north is based on the powerful economic, material-technical, sociopolitical and spiritual basis of a developed socialism. Constant attention to the fates of the small peoples of the north, consideration of the peculiarities of their development are appropriate to the spirit of Leninist nationalist politics, the politics of the CPSU and out multi-national state. [293-9194]

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9194
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RAILROAD

PROBLEMS OF CONSTRUCTION AND DEVELOPMENT OF THE BAM ANALYZED

Moscow OBSHCHESTVENNYYE NAUKI in Russian No 6, 1979 signed to press 19 Oct 79 pp 180-184

[Article by A. Kin, candidate of economic sciences, academic secretary of the USSR Academy of Sciences' Scientific Council on Problems of the Baykal-Amur Mainline: "BAM" A Study of the Problems of Construction and Economic Development"]

[Text] In the decree "On Improving Planning and Strengthening the Effect of the Economic Mechanism on Increasing Production Efficiency and Work Quality" (1979), the CPSU Central Committee and the USSR Council of Ministers named the development of over-all programs for construction of the Baykal-Amur mainline (BAM) and development of industry in the regions through which it passes among the priority tasks for the near future.

The Baykal-Amur railroad line is an unprecedented construction project in length and in the complexity of construction conditions. The east-west length of the line from Ust'-Kut (Lena Station) to Komsomol'sk-na-Amure through Nizhneangarsk, Chara, Tynda and Urgal is 3,145 km, and the total length of the BAM, taking construction of the north-south Little BAM (BAM-Tynda-Berkakit) into consideration, will be more than 3,500 km.

A 100,000-person collective of construction workers has been formed over a relatively short time span along the route of the BAM, in a practically uninhabited place in sparsely populated and, with regard to transport, almost inaccessible regions, and about 50 urban-type villages have been built. Today, working train traffic has been opened on more than one-third of this mainline. The Little BAM has been put into permanent operation.

The territory adjoining the BAM is about 1.5 million square km. Large reserves of various useful minerals, the exploitation of which will have a great economic effect on the national economy, are concentrated within this zone. This grouped distribution of useful minerals is an important feature of the zone. This situation will facilitate the over-all development of natural riches by establishing a number of large territorial production complexes (TPC) and individual industrial units.

The selection of the economic strategy for development and the determination of boundaries and production structure for future TPCs, the development of the engineering politics of deposit exploitation and solution of the social-economic problems of populating this zone, i. e. realizing a number of tasks which are constituent elements in the program for development of the BAM are the most important scientific-practical tasks associated with the planned over-all program for economic development of the BAM zone.

Questions concerning the economic development of the BAM zone are currently being worked out in many scientific centers of the USSR Academy of Sciences, in the institutes of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin (VASKhNIL) and the Academy of Medical Sciences, and in the scientific-research institutions of higher schools and various sector ministries and departments.

The Scientific Council on Problems of the Baykal-Amur Mainline was established in 1975 in affiliation with the Section of Earth Sciences of the Presidium of the USSR Academy of Sciences with the aim of coordinating the scientific research associated both with construction of the BAM and with development of the territories adjoining the mainline. It was headed by Academician A. Aganbegyan. The following sections were components of the council: Geology and Mineral Resources, the Problems of Environmental Protection and Social-Economic Problems. The Council is basing their research-coordinating work on close contacts with scientific subdivisions of ministries and departments and branch academies which have been assigned about 20 percent of all research according to the coordination plan. As a rule, the academic institutions work on joint developments with the scientific institutions of the sector academies, ministries and departments. Thus, the Institute of Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences, the Central Economic Scientific-Research Institute affiliated with RSFSR Gosplan and the Siberian Department of VASKhNIL are jointly solving the over-all problem "Creation of a Food Base in the BAM Zone"; the Institute of Geology of Siberia and the Far East of the Siberian Department of the USSR Academy of Sciences and the Siberian Department of the USSR Academy of Medical Sciences are studying the problem "Adaptation of Man under Conditions of the North"; the institutes of Geological Profile of the USSR Academy of Sciences is conducting research on topics associated with the BAM along with regional scientific-research organizations of the USSR Minister of Geology.

The activity of the Scientific Council and its sections is developing on the basis of unified five-year coordination plans for the problems of construction and economic development of the BAM zone. During development of the first such plan, the main tendencies in the research were conditionally divided into 3 groups: a study of the resources of all kinds and means for their exploitation (this group of studies constitutes 62 percent of all topics covered according to the plan); means for managing and the social-economic development of the economy of the BAM zone (22 percent); protection of the health of man and the environment (16 percent).

Studies of the problems of geological profile dominate the coordination plan. Such a situation cannot be considered coincidental. The fact is that research directed at obtaining the maximumly complete information concerning the mineral-raw material resources of a region should precede socio-economic studies.

Research included in the coordination plan may be represented as a system constructed on the principle of a scientific production cycle. It includes stages from the fundamental scientific idea to applied research and on to the creation and use of engineering systems and, finally, the calculation of the possible socio-economic effects of its realization. In this system, about 70 percent of the research falls to fundamental and applied sciencies. Experimental-design developments constitute about 17 percent. Such a ratio indicates the intensification of the role of academic science in the solution of production problems and the introduction of the achievements of science directly into the practice of construction of the mainline and development of the BAM zone.

The research being coordinated by the Scientific Council is either multi-aspectual (when the solution of problems which have been posed influences many aspects of economic development) or uni-aspectual (when the solution to problems which have been posed is localized). The share of the latter is more than 60 percent, attesting to the predominance of research associated with the accumulation of knowledge based on concrete problems of the forthcoming development. This is not coincidental: actual construction practice and the priority development of regions adjoining the sections of the BAM which have already been built require the urgent solution of a whole series of engineering and socio-economic problems. One must expect that topics associated with the development of the zone and the distribution and production structure of TPCs and with socio-economic problems will predominate in the coordination plan of the 11th Five-Year Plan.

The primary result of the coordination activity of the Scientific Council is the development of a long-term program of research on the problems of economic development of the BAM zone.

Goal orientation and the selection of socio-economic and scientific and technical strategies taking into consideration the specific natural-climatic conditions and other features of the long-term process of the zone require preliminary performance of a whole set of fundamental and applied studies which should become the scientific base for the adoption of practical decisions.

The long-term period of economic development of the natural riches in the territory adjoining the BAM confront researchers with the need for examination of the prospects for development of this zone in the future in probability terms. This means that the methods being used for predicting the future cannot be based on extrapolation of tendencies which have come to be established. A situational analysis and its methods, particularly writing scenarios for the future[1], may serve as a usable set of tools.

The Council prepared a report on the scientific bases of the program for economic development of the BAM zone based on the scientific developments of the academic institutes which were worked on together with other scientific institutions within the limits of the coordination plan. In it, both methodological questions about the problem for economic development of the zone and its practical direction are examined on an over-all basis. Variations of solutions to problems of the economic development of the zone have been proposed, taking into consideration the situations of the future (scenarios) for development of the entire country and the growth of the economic potential of the eastern regions.

An analysis of the tendencies and the regularities in the development of regions of Siberia and the Far East, the scientific and resource requisites for realization of the BAM program revealed the objective nature of the problems of economic development of the zone adjoining the mainline. It is examined as one of the key links in the three-dimensional development of the nation's national economy at the stage of developed socialism. This makes it necessary to carry out a policy of "economic protectionism" with regard to the given region.

In a summary report from the Scientific Council, an attempt is made to determine the extent of the interaction between the elements of production forces and components of the natural complex, making it possible to formulate the socio-economic and scientific-technical strategy for the economic development of the BAM zone more precisely. Elements of this strategy may serve as criteria of practical significance for the preplanning scientific developments which were carried out. Within the limits of the socio-economic strategy, the processes in the formation of labor resources, their attraction and consolidation, the increase in the numbers of the population, the requirements for conditions of its adaptation and the necessary prerequisites for creating material and cultural-domestic conditions were studied. Questions about accumulating the consumption funds for satisfying the requirements of the zone's population were analyzed.

Much attention has been devoted to questions on the production of products for export, and, in association with this, the possibilities for transit-container shipment in an east-west direction.

The Scientific Council is carrying out its activity by holding periodic meetings, sessions and various conferences. An overwhelming part of the Council's meetings occurred right in the regions in which the Baykal-Amur Mainline is being constructed (Severobaykal'sk, Tynda, Neryungri,

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[1] See V. D. Grober, A. P. Dubnov, A. A. Kin. Features of the Regional Program Structure. "Metodiki i opyt razrabotki regional'nykh program [Methodology and Experience in Drawing Up Regional Programs]. Moscow, 1977.

Komsomol'skna-Amure). Main problems of construction and economic development of the BAM zone on the whole, and particularly the territories adjoining the sections of the BAM which have already been built, are examined at the Council's visiting sessions.

As a result, concrete recommendations are being worked out for ministries and departments on the main problems of construction and economic development of the zone. Thus, for example, participants at the Council's session at Severobaykal'sk (September, 1978) were acquainted with the progress of construction on the Buryatskiy section of the BAM and came to the conclusion that it was necessary to build a railroad by-pass parallel to the Severo-Muyskiy Tunnel. The presence of such a by-pass will accelerate construction of the more complex section of the BAM route from the eastern portal of the tunnel to the river Vitim, will increase the reliability of BAM route operation as a line of through-train traffic and will permit development of the unique natural resources of this region and construction of the Mokskaya Hydroelectric Power Station to begin approximately 2-3 years earlier than the planned deadline, etc.

Discussion of the problems for forming the Southern Yakutsk territorial production complex, a first in the economic development of the BAM zone, at the Council's meeting at Neryungri (March, 1979) showed that the strategy for developing natural resources within this region was properly selected. The railroad arrived in the Neryungri coal basin just at the time of planned shipment of coking coal for the national economy. Large-scale production based on the newest technology and the production practice of increased unit capacity is economically efficient.

Meeting participants noted that introduction of projects for the socio-domestic infrastructure lag behind requirements for them, and they adopted recommendations directed toward an accelerated solution to housing problems in the development regions of the BAM zone.

Participation in the preparation and running of all-union scientific-practical conferences on various aspects of the problem of economic development of the zone is yet another form of the Council's activity. Research in progress based on the BAM program was discussed at the first conference (Chita, September, 1975), and the main directions of scientific inquiry were planned. The second conference (Blagoveshchensk, September 1977) was devoted to an examination of the scientific bases of the BAM program. The materials which were presented for discussion were prepared in accordance with scientific-methodological recommendations adopted at the preceding conference. The positive experience which has been accumulated in solving problems concerning development of the northern part of the Western Siberian Plain, formation of the territorial production complex for the Angaro-Yeniseyskiy region, etc. were considered. The Council prepared concrete recommendations covering a broad spectrum of problems for the ministries and departments engaged in developing the BAM zone based on the materials from the two conferences.

In March, 1979 in Tynda, the Scientific Council, together with scientific institutions of the Siberian Department of the Academy of Medical Sciences, the Siberian Department of VASKhNIL and Main Administration for Construction of the BAM organized and conducted an all-union scientific-practical conference on the topic "Man on the BAM." The conference's work was devoted to discussion of questions of exceptional importance to which L. I. Brezhnev devoted special attention during his trip through regions off Siberia and the Far North during March-April, 1978. The conference summed up the important work which the scientific, economic, party, and soviet organizations perform on the key questions of improving conditions in the life and everyday living conditions of people working on the BAM. Developed recommendations were adopted in which the main trends for scientific research and concrete measures for improving the conditions for the vital activity of man within the regions of the BAM were planned.

In September 1979 the Scientific Council held visiting sessions in the cities of Komsomol'sk-na-Amure, Sovetskaya Gavan' and Vladivostok, at which questions associated with the export orientation of plants in the BAM zone and results of scientific research on the problems of economic development of the eastern section of the BAM zone were discussed.

Construction of the BAM is going on ahead of planned schedules in many sections. The problem of widespread introduction into circulation within the national economy of natural resources in regions where the BAM route has already arrived stands sharply on the agenda. Practical recommendations to ministries and departments concerning formation of the economy in the BAM zone should be made by the Third All-Union Scientific-Practical Conference on Problems of the Economic Development of the BAM Zone, which will be held in September 1980 in Ulan'Ude.

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9194
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OCEAN AND RIVER

COMPUTER SYSTEM FOR RIVER TRANSPORT DESCRIBED

Moscow VODNYY TRANSPORT in Russian 13 Nov 79 p 1

[Article by N. Dolgov, director, Ministry of the River Fleet Main Computer Center: "Computers Work for River Transport Workers"]

[Text] The growth in the scale of production and qualitative changes in economics, the shift of the center of gravity in its development from extensive to intensive methods, have imposed fundamentally new higher requirements on the system for management of the national economy. This relates to the full extent also to river transport, in which in recent years has been considerably expanded the range of application of computer technology. Eleven computer centers are in operation in the river transport system, and in the planning and construction stage are five more, which will go into service in the 11th Five-Year Plan period.

For the functioning of ASU's [automated control systems] of different levels has been organized the gathering of operations information from 20 shipping lines and 54 ports. Production-process lines have been created for linking the main computer center with the ministry, the Moscow West and South ports, and the Volga United and Northwest shipping lines. It should be mentioned that these production-process communications lines for second-generation computers are the most complete in our country. The work of the main computer center is becoming more diversified and intense each year. Suffice it to say that at the industry level (that of the ministry) have been automated such operations reporting functions as the fulfillment of plans for the transportation of cargo and passengers, for unloading and unloading operations, for 10-year planning, for reporting and analysis of the fleet's operations, for handling of the fleet and cars in ports, for statistical reporting of the fleet's operations, for the receipt and transfer of cargo to the jurisdiction of allied shipping lines, and many other functions. During the sailing period the center each 15 minutes issues a decision for ASU's of different levels.

The management structure of the main computer center has been improved. In the area of the organization of planning, development subdivisions have been specialized with respect to the most important functions (data support and software). A changeover has been completed to a crew-function method of organizing the servicing of the computer hardware complex and data transmission system. The introduction of the crew method of servicing computers has made it possible to improve the preventive maintenance servicing of machines. The percentage of lost time has been reduced for "Minsk-32" machines.

The introduction at the main computer center of a new technology for preparing programs has made it possible to reduce by 25 percent the time for debugging programs and to save 85,000 rubles in 1974-1978. At the present time we have embarked upon the development of a longterm program for the re-equipment of machine-accounting units in the industry, which is intended for the next five years. This will make it possible to carry out a purposeful technical policy in the area of the mechanization of bookkeeping, statistical reporting and engineering management work.

Last year we put into service the M-5000D computer program complex, designed to automate statistical reporting. A planning group was created for the development of production-process work projects in the area of statistical reporting and bookkeeping for river transport enterprises. In keeping with the longterm comprehensive work program, the intent is to shift from tabulators to computers in 1981 all calculations performed by us for Moscow enterprises with regard to the bookkeeping complex, and in 1984, also, the development of statistical reports for the Ministry of the River Fleet.

This will make it possible to create a unified technical base and technology for data processing for all types of computing work--for computers of different classes--as well as to make the center's subdivisions clearly specialized. The nature of the work done by the statistical reporting department will also change: The functions of processing statistical reports on keyboard computers will be dropped. On account of this will be made possible total integration of teams at the main computer center and the former TsFMS [Central Machine-Calculating Office]. But for the purpose of solving this problem it is necessary to provide for the territorial unity of two of these subdivisions located in Moscow, and to restructure and rebase the TsFMS subdivisions in the old Moscow Shipping Line building.

One of the priority problems of the "Rechflot" [River Transport] ASU is the unification of documentation, which will include not only the elimination of variations in duplicate information and its adaptation for machine processing, but also the creation of documents for recording descriptions of systemwide files of conventionally permanent data.

The necessity is also imminent of designing a system of providing data support for the "Rechflot" ASU in the industry. It is time for scientific institutes to shift from arguments regarding the benefit of the systems approach to the development of distinct methodological principles for the structure of data support.

The amount of work on the improvement of planning decisions which are to be implemented is growing. Therefore, the lack at the main computer center of a surplus of planned capacities is certainly not making it possible to do this job on the basis of internal resources. But since this trend in the operation of an ASU is, as it were, a necessary evil, we have been confronted with the dilemma: either to alter the structure of work in the area of planning at the main computer center, or to increase its capacities further in this direction.

Up until recently, planning work in the area of the automation of control functions was performed by the center in interaction with institutes. The final element in the planning of an ASU has always been the main computer center, whose percentage of the total amount of work equals 60 to 65 percent. Being a subcontractor, the computer center has always depended on the observance by institutes of deadlines and on the quality of the planning work done by them. In not honoring deadlines, institutes at best were limited in terms of moral responsibility. This was reflected in the work of the main computer center team. Therefore, where possible, we try to work without intermediaries. Our center henceforth will not set itself the goal of self-isolation from combined work with institutes with regard to the creation of the "Rechflot" ASU. Simply, instead of being a center for the performance of scientific experiments by institutes, our team will strive to perform primarily work which is already now producing a practical result.

Unfortunately, it is necessary to mention the fact that the personnel of some shipping lines and ports are continuing to violate the instructions approved by the Ministry of the River Fleet relating to the filling in of telegrams, and errors in information are not infrequent. The production discipline of line personnel involved in gathering, preparing and transmitting data is low. Operations data during the sailing period is continuing to arrive with insufficient certainty and with the violation of established production-process schedules. Guilty of this especially frequently have been the Irtyshk, Volga-Don and Belomorsk-Onega shipping lines.

Of course, the Ministry of the River Fleet cannot solve our problems by administrative measures alone. This can be achieved by our daily painstaking work. But it is necessary that this work not be the privilege of just the main computer center's team alone.

8831
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RIVER FLEET'S PROBLEMS IN TRANSPORTING WOOD PRODUCTS

Northern Steamship Company

Moscow VODNYY TRANSPORT in Russian 26 Feb 80 p 2

[Article by Ye. Klimov, Pertominsk steamship captain, Severnyy Steamship Line: "Maximum Loads for Lumber Ships"]

[Text] About 40 percent of all the lumber sold the state for the foreign market is shipped from the country's northern maritime basin. This output is basically transported by the specialized fleet of the Severnyy [Northern] Steamship Line.

The technology for hauling lumber is constantly undergoing qualititive changes. For example, stacks have been used increasingly extensively since 1970. At present, they comprise more than 80 percent of the total, and all lumber for export is shipped by this method from White Sea ports. The new technology has permitted a reduction of approximately 30 percent in total loading and unloading expenditures.

However, construction of the lumber-ship fleet has until recently been oriented towards hauling lumber loose. For this reason, it now includes a large number of ships which are poorly suited to shipping in stacks: gas turbine ships of the "Pazlin Vinogradov" type, steamships of the "Volgoles," "Vytegrales," "Petrozavodsk," "Igarkales," "Kotlasles," "Konstantin Shestakov," "Sosnovets" and "Balkhash" type. The economic effectiveness of shipping stacks on these ships is considerably lower than on specialized ships. Thus, the prime cost of transporting a ton of stacked lumber and expenditures per ruble of net profit are 29 percent lower with the new stack-loading ships than with a "Bytegrales" lumber ship and throughput capacity is 50 percent higher.

Veteran ships in the Severnyy Steamship Line comprise 82.4 percent of the whole lumber-ship fleet and will be in operation for another 10-15 years. From this, it becomes very urgent that the efficiency of their use be increased to the maximum. The game is worth the candle, as they say, since the potential hidden here is truely enormous. It appears that we first must influence such decisive factors in lumber hauling as degree of mechanization of intrahold work, stack shape and size, and stack compactness.

Take intrahold work mechanization. This is the weakest link in the technological process of loading stacks today. To be more precise, intrahold mechanization is totally absent. For this reason, loading is characterized by very low production standards. Given the large subdeck spaces of the old lumber ships, up to 4.2-4.9 meters deep, this leads to an increase in cargo operation time and loading quality decreases, since filling up subdeck space involves breaking reference bands and destruction to stacks.

Sailors in our steamship line have accumulated a great deal of experience in putting stacks in holds using automatic loaders while working for foreign charterers on a lease basis. Thus, according to time-and-motion studies made while loading the Pertominsk, the time needed to put in a stack below deck without an automatic loader is six minutes and the time using that equipment is only three minutes. Average stack loading time without intrahold machinery is 20-30 cubic meters per hour; time using automatic loaders is 40-55 cubic meters per hour.

Small three- to five-ton automatic loaders in older-generation lumber-ship holds would help reveal a very important potential for increasing the operating efficiency of these ships. At the same time, we would solve the problem of increasing loads and improving stack pattern quality, stevedores would be freed for other work, and heavy, dangerous manual labor would be eliminated.

One other factor -- stack size. Until recently, the lumber industry of the north produced narrow stacks. We are currently changing over to larger ones, which is more efficient, we agree. Their use is effective on the condition that they will be shipped in holds in the shape of a parallelepiped in which nothing hinders putting stacks in close to one another, although subdeck space is minimal. But it must not be forgotten that the end holds, especially in older lumber ships with curved shapes, cannot be filled with large cargo spaces without significant losses of useful volume. While sailing the Igarka in 1977 after changing over to large stacks, I noted a shortfall of 200-400 cubic meters on all older-generation lumber ships.

Foreign practice convinces us that the optimum size of a stack for ships with a great deal of subdeck space is a stack-unit one meter by one meter consisting of four stacks. Our industry has mastered the production of stacks 1100x1100 mm, which means we could set up to produce this output in four-stack units. This would also increase significantly the throughput capacity of the fleet. But it must be added that loading instructions give the shipper the right to break down such stack-units into their components to fill holds to the maximum. In practice, it is necessary to break down less than 10 percent of the stack-units fleet-wide.

The use coefficient for ship cargo capacity for the steamship line is 0.82 for stacks made up of boards of the same length, 0.75 for boards of three or four lengths, and 0.62 for boards of six lengths.

Expressed in absolute figures, the load of a Petrozavodsk type of ship, for example, would be 7,500 to 7,600 cubic meters for stacks of boards of the same length and 6,100-6,200 cubic meters for stacks of boards of different lengths. The difference is obvious.

Under the terms of lumber forward contracts, only the provisions regarding board width and thickness are obligatory. The length of the individual boards must be more than a certain minimum -- 1.5 meters and divisible by 30 centimeters. Thus, every requisite exists for the economically justified shaping of stacks to contain the most wood possible.

Taking this step alone would go a considerable way towards solving the problem of making maximum use of the cargo capacity of older-generation lumber ships and their safe navigation, which is very urgent given the conditions in the northern seas. Actualization of the measures proposed here would, I should think, increase the efficiency with which lumber ships built in the 1960's are used.

Kirensk River Port

Moscow VODNYY TRANSPORT in Russian 4 Mar 80 p 2

[Article by N. Sapsay: "Reproaches Instead of Work"]

[Text] Kirensk river port is the sole enterprise in the Lena Steamship Association concerned with shipping lumber on a large scale. During the last navigation period, the plan was for the port to deliver 72,700 tons of wood. Only 43,800 tons was actually shipped. Why?

The collective of Kirensk, always among the leaders in the basin's socialist competition and able to have coped with the production program for handling cargo for the first four years of the five-year plan, failed to meet the plan for shipping lumber. We should note that this plan was also consistently not met in preceding years.

There are five timber industry enterprises within the Kirensk river port activity zone. They all concluded agreements to deliver lumber and rough timber with the administration of the Lena River Steamship Line. But not one of the timber industry enterprises was completely successful in shipping out its wood as outlined by the agreements. When marketing plans are not met year after year, lumber sits in one place, losing its value, and becomes useless. This leads in the end to the inefficient use of forest resources. River workers are also "not in debt" as concerns violating these agreements. Interruptions in the operation of the timber conveyor also occur because the steamship line fails to supply ships for loading smoothly.

It would seem nothing could be simpler than for an empty ship going from the lower reaches of the Lena to stop at the lumber docks, pick up cargo, and continue on to Osetrovo. But empty ships often pass by; they are not in the mood for incidental cargo which could mean stopping for a couple of days on the Osetrovo run to wait for unloading.

The fact is that processing the fleet with lumber has grown into a critical problem at Osetrovo river port. The construction of lumber docks with rail spur tracks is still not finished here. And river workers are often forced to unload lumber on the shore, or if they are lucky, right into rail cars. But when they cannot unload onto the shore and there are no cars, the steamship stands dead in the water. In order to avoid this fleet idle time, the steamship line sometimes refuses shipments of lumber cargo in violation of agreements with related production units.

"But it is not just the lack of reliable unloading docks in Osetrovo that delays the lumber conveyor," says Yu. Bovin, chief of Kirensk port. "The speed with which the fleet is processed at docks at several timber industry enterprises is also slow. This applies foremost to the Kuybyshev timber industry enterprise. Ships often stand idle here for 3-4 days, instead of the norm of 10-12 hours."

What is the way out of this situation. How can the delivery of Lena pine to customers be speeded up?

For several navigation seasons now the steamship line has been planning to assign four 1,000-ton barges to the Kirensk-Osetrovo line, with steamships to deliver needed cargo from Osetrovo to the river-workers' city and from there, to ship out timber industry enterprise output from lumber docks located nearby. But for various reasons, this plan has never been implemented.

Assigning groups of ships to haul lumber is a worthwhile matter, in the opinion of those at the Kirensk river port. That would make it possible to use the fleet more efficiently and to plan in advance the supplying of ships for loading to the timber industry enterprises, which would greatly reduce unproductive fleet down time at lumber docks.

Along with this, it is necessary to improve the transshipment of lumber cargo in Osetrovo port, to accelerate the construction of lumber docks here. Finally, timber purchasing agencies must meet their contractual obligations. Only then will we be able to move from counter claims to the business-like solution of the problem.

11052
CSO: 1829

MISCELLANEOUS

UKRAINIAN SSR 1979 TRANSPORTATION PLAN FULFILLMENT

Kiev RABOCHAYA GAZETA in Russian 31 Jan 80 p 2

[Report of the Ukrainian SSR Central Statistical Administration on the Results of Fulfillment of the State Plan for Economic and Social Development of the Ukrainian SSR in 1979]

[Excerpt] III. Transport and Communications

Freight turnover by all forms of transport: Amounted to 784 billion kilometers, increasing 3 percent compared with the previous year.

Raid transport: Carried 986 million tons of freight, although the plan was underfulfilled; freight turnover amounted to 469 billion ton-kilometers.

Maritime transport: The plan for shipping cargo in inland and international waters was overfulfilled. Shipments in foreign waters increased by 11 percent. Shipment of cargo in containers and on pallets increased by 6 percent. At maritime ports the plan for loading and unloading operations was fulfilled; 95.5 percent of the overall volume of these operations was handled by fully mechanized procedures.

Common carrier river transport: The plan for cargo shipment was fulfilled by 102 percent; 51 million tons of cargo were shipped. The plan for freight turnover was fulfilled by 100.9 percent; freight turnover amounted to 10.5 billion ton-kilometers.

Oil pipeline transport: The plan for freight turnover and delivery of oil and petroleum products was fulfilled. Freight turnover increased by 23 percent compared with 1978, totaling 52 billion ton-kilometers; delivery of oil and petroleum products was increased by 15 percent, totaling 94 million tons.

Common carrier motor transport: The freight turnover was 17 billion ton-kilometers, or 5 percent more than in 1978. Shipment of freight increased to 1.1 billion tons, or by 5 percent. The plan for freight turnover was underfulfilled slightly. In common carrier transport by buses, the plan for carrying passengers was fulfilled by 101 percent and the plan for passenger turnover was fulfilled by 100.4 percent. The plan for fare trips by passenger taxis was fulfilled by 103 percent. Transportation of passengers was increased by 2 percent, passenger turnover was increased by 3 percent, and fare trips by passenger taxis were increased by 17 percent.

Air transport: The plan for passenger turnover (sectional) and transportation of passengers, as well as the overall volume of shipments and operations by aviation in serving sectors of the national economy, was overfulfilled. Twelve million passengers were carried during the year. Operations in agriculture and forestry were carried out over an area of 18 million hectares.

There were serious shortcomings in the work of railway transport, and requirements for the shipment of freight were not fully met.

Communications enterprises (mail, telegraph, telephone, radio): The plan for overall output volume was fulfilled; the output volume of communications was increased by 5 percent compared with 1978. The plan for increasing the extension of telephone channels in intercity lines of communication and increasing the capacity of urban and rural telephone stations and channel switching centers [uzly kommutatsii kanalov] of the state data transmission system has been fulfilled. The network of radio and television broadcasting stations has been expanded.

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USSR REPORT: Consumer Goods and Domestic Trade
USSR REPORT: Human Resources
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*Cover-to-cover

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